# Irrigation Council Annual Report, 1921.

## IRRIGATION COUNCIL ANNUAL REPORT 1921.

To the Honourable, The Chairman of the Executive Council.
Sir:

We have the honour to submit herewith a report of the operations of the Irrigation Council for the year 1921.

The Irrigation Council is an administrative body created under the provisions of the Irrigation Districts Act of 1920 for the purpose of supervising the operations of the Irrigation Districts in the Province of Alberta.

Up to May, 1921, the Council consisted of one member, Mr. L. C. Charlesworth. On that date, Mr. G. N. Houston, then Acting Commissioner of Irrigation for the Dominion, was appointed as the second member with duties of Secretary, Mr. Charlesworth becoming Chairman.

In order to have a representative of the Council readily available to the officers of the irrigation districts, an office was opened in the Provincial Public Works Building in Lethbridge by the Secretary, the Chairman having his headquarters in Edmonton.

The Council employs one assistant in the Lethbridge office, Mr. C. J. Brodrick, whose salary is paid by the irrigation districts which are under construction or in connection with whose affairs the Council exercises supervision.

The work of the Lethbridge office has come under two heads:

1. Supervising irrigation districts which have been erected and are under way.

2. Advising farmers in those areas where districts are proposed.

The following is a summary of the irrigation districts and proposed projects which have occupied the attention of the Council during the past year:

Schedule of Irrigation Districts.

| Name of District | Approximate Irrigable Acreage | Amt. of Bonds Authorized | Cost per Acre | Remarks |
|---|---|---|---|---|
| Taber | 17,000 | $ 272,000 | $16.00 | Operating. |
| Lethbridge Northern | 105,000 | 5,400,000 | $51.26 (Estimated) | Under construction |
| United | 23,000 | 645,000 | $28.00 (Estimated) | " |
| South Macleod | 61,000 | | $27.72 (Estimated) | Organizing. |
| Medicine Hat Southern | 5,300 | | $49.80 (Estimated) | " |
| Medicine Hat Eastern | 5,000 | | $61.27 (Estimated) | " |
| Lethbridge South Eastern which includes Southern, New Dayton, Massinasin, Warner, Milk River | 350,000 | | | |
| Little Bow | 2,786 | | | Organizing. |
| North Retlaw | | | | |
| Retlaw-Lomond | 100,000 | | | |
| Champion | 50,000 | | | |
| New West | 3,000 | | | |
| William Pearce Project (N. Sask. Scheme) | | | | |
| Eyremore | | | | |

## Taber Irrigation District.

This district is now in its second year of operation and is in a very satisfactory condition. Practically the whole district was irrigated last season either during the cropping season or by fall irrigation. The Council approved an irrigation rate of $2.00 per irrigable acre for this district for the year 1921 which proved sufficient for their requirements. It is estimated that the same rate will be necessary for 1922. The average holding of irrigable land in this district is 170 acres.

## Lethbridge Northern Irrigation District.

This district was formed on October 23rd, 1919. At that time certain areas in the vicinity of Macleod, Rocky Coulee, Barons and Carmangay, which might be served by the same works were given an opportunity to form part of the district but did not come in. An engineer was employed in November, 1919, and field work and plans of works were commenced.

The Provincial Government, having been approached for assistance in financing the construction of the works, employed Mr. Geo. G. Anderson, a consulting irrigation engineer, to make an independent report upon the feasibility of the project. His report was favourable and the Government by special legislation in 1920 provided for a partial guarantee of the debentures of the district. In order that the residents of the areas in the vicinity of Macleod, Rocky Coulee, Barons and Carmangay which could be served by the same works might be given a final opportunity of joining in the project the debenture issue was delayed until October, 1920. Only those in the vicinity of Macleod availed themselves of the opportunity and about 5,000 acres there were added to the district.

Mr. Anderson's estimate of the cost of the works amounted to $51.26 per irrigable acre and debentures to the extent of $5,400,000.00 were authorized and, carrying the Government's partial guarantee, were offered for sale without success.

The Legislature in 1921 passed an Act fully guaranteeing the debentures. Supported by this guarantee the first issue of these bonds of $2,400,000.00 par value were sold on May 26th of this year at $93.71. A second and a third issue for a million each were sold at the same price during July, making a total outstanding bond issue of $4,400,000.00 for which they received $4,123,240.00 net. The bonds were sold by the Provincial Treasurer and the money deposited to the account of the Lethbridge Northern Irrigation District Trust Fund in the Imperial Bank at Edmonton. The money being thus provided construction work was commenced.

The Lethbridge Northern Irrigation Districts Act, 1920, in addition to guaranteeing the bonds, also imposed upon the Irrigation Council the exclusive duty of doing all necessary work preparatory to letting of contracts for construction. Accordingly the Council has advertised and received tenders for the following work and the district has entered into contract with the following parties on the advice of the Council:

## LETHBRIDGE NORTHERN IRRIGATION DISTRICT

### Summary of Contracts Awarded

| No. | Character of Work | Date Tenders opened | Contractor | Contract price | Expended to Dec. 31 | Date for completion | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | Canal Excavation, estimated 6 million cubic yards all classes | 1921 June 1st | Grant, Smith & Co., & McDonnell | Class 3—24c. Class 2—80c. Class 1—$1.00 *$1,660,279 est. | $1,072,555.15 | May 1, 1923 | |
| 1a | Supply of metal culverts | June 18th | Canada Ingot Iron Co. | 17,359.19 | 17,359.19 | Immediate | |
| 2 | Concrete masonry and timber trestle work on main canal | July 20th | A. G. Creelman & Co. | *134,719.95 est. | 65,830.85 | Nov. 30, '22 | |
| 3 | Furnishing material and constructing steel bridge work at crossings of Oldman River and Willow Creek | Aug. 29th | Dominion Bridge Co. | 110,386.00 | Nil | Sept. 30, '22 | |
| 4 | Furnishing material and constructing wood-stave pipe syphon | Sept. 1st | Canadian Pipe Co. | *121,687.75 est. ($32.15 per ft.) | Nil | Apr. 30, '23 | |
| 5 | Furnishing material and constructing metal flume | Sept. 1st | Pacific Sheet Metal Works. | *46,920.00 est. ($12.00 per ft.) | Nil | Apr. 30, '23 | |
| 6 | Masonry in headworks spillway and crossing of Oldman River and timber trestle works | Sept. 17th | A. G. Creelman & Co. | *364,619.50 est. | 49,822.73 | Apr. 30, '23 | |
| 6a | Machinery for headworks | Sept. 17th | Man. Bridge & Iron Works | 17,700.00 | Nil | Aug. 1, '22 | |
| 7 | Supply of lumber and timber | Oct. 19th | Jewell Lumber Co. | *111,545.67 est. | 5,009.96 | Mar. 1, '22 | |
| 8 | Telephone line from headworks to Main Office | Oct. 4th | John S. Glover | 1,442.25 | 1,442.25 | Jan. 1,'22 | Complete |

*Note.—Wherever the contract price is estimated, it indicates that the tender was submitted for unit prices and the amount shown may be more or less according as the work actually done exceeds or is less than the estimated amount.

The date of completion given is the final date. In some contracts certain parts of the work must be completed before the date given.

All these contracts were let by competitive bidding and the tenders were opened in public at the office of the council in Lethbridge.

Either a bond or a substantial cash deposit has been required from the contractor as a guarantee that he will faithfully carry out the contract except in the cases of contracts 1*a* and 6*a* which were for furnishing material only.

### CONTRACT NO. 1.

The contract for canal excavation was widely advertised in Canada and the United States resulting in five tenders being received. Grant Smith and Company and McDonnell of Vancouver and Calgary, being the lowest responsible bidders, were awarded the contract. The next lowest bidder, W. A. Dutton of Seattle, was $25,000.00 higher. The other bids ranged between this and the bid of Winston Bros. of Minneapolis, who were $291,000.00 higher.

Upon the awarding of the contract for excavation of the main canal, active work was begun within fourteen days and continued steadily until the middle of November, when weather conditions compelled most of the sub-contractors to shut down for the winter. The excavating of the deep cut near Barons on the Main Canal inlet to Keho Lake is stil progressing and will probably continue all winter. Although a great deal more rock has been encountered than was anticipated, the contractors are handling the material satisfactorily with a large drag-line. It is estimated that the excavation in this cut is about thirty per cent. done and will be completed within ten months.

The whole contract for canal excavation is about sixty per cent. completed. The completion of the work within the time specified being of vital importance to the farmers of this district who might suffer severe loss through lack of water, the contractor is required to pay heavy damages for non-completion.

### CONTRACT NO. 1*a*.—METAL CULVERTS.

Tenders were asked for the supply of culverts manufactured from three different classes of material: (1) galvanized iron or steel; (2) galvanized copper bearing iron or steel; (3) pure iron. Bids were received from six different manufacturers. The contract was awarded to the Canada Ingot Iron Company for culverts manufactured from ingot iron.

### CONTRACT NO. 2.—MASONRY AND TIMBER TRESTLE WORK, MAIN CANAL.

The work under this contract consists of all the concrete structures on the Main Canal between the Oldman River Crossing and Keho Lake and the timber trestle for the flume at the Willow Creek Crossing. This included the concrete piers and pedestals and inlet and outlet portals for the flume at the Willow Creek Crossing; the inlet and outlet portals for Rocky Coulee and Kenex Syphons; the Monarch Branch headgates and other structures amounting to about 4,000 cubic yards of concrete.

Eight bids were received ranging between $134,720 and $199,867. The contract was awarded to A. G. Creelman, the lowest bidder. The second lowest bidder was only $461.00 higher than Creelman. It is estimated that this contract is about sixty per cent. completed.

## Contracts Nos. 3 and 5.—Steel Bridgework and Metal Flumes.

The main canal out of the Oldman River on the east side of the Peigan Indian Reserve and continues on that side for about three and three-quarters miles where it crosses the Oldman River in a semi-circular steel flume fourteen feet four inches diameter and over half a mile long. When this structure is completed it will be one of the largest metal flumes in existence. This flume is carried across the main channel thirty feet above high water on seven steel trusses each of one hundred and nineteen feet span supported by concrete piers. For the remaining distance it is carried on a steel and wooden trestle. About twelve miles north of this point the main canal crosses Willow Creek on a flume of similar construction. Contract No. 3 is for furnishing and erecting the steel work in these crossings. Bids were received from four bridge companies ranging from $110,386.00 to $140,121.00 The contract was awarded to the Dominion Bridge Company who was the lowest bidder Contract No. 5 is for furnishing and erecting the steel flume on the steel work provided for by contract No. 3.

Bids were asked for flumes manufactured from three different materials: (1) pure iron; (2) plain galvanized iron; (3) galvanized copper bearing steel. Five regular bids were received and one informal bid for a wood-stave flume substitute. The prices ranged from $11.01 per lineal foot for galvanized steel to $14.25 per lineal foot for pure iron. The contract was awarded to the Pacific Sheet Metal Company for copper bearing steel at $11.25 per lineal foot, they being the lowest bidders for all three classes of material.

No material has been delivered under these contracts Nos. 3 and 5.

## Contract No. 4.—Wood Stave Pipe.

It is planned to have the main canal cross Rocky Coulee in a wood stave pipe ten feet in diameter and a little over half a mile long. A short distance further on it crosses Kenex Coulee a distance of 930 feet in a similar pipe.

Contract No. 4 is for furnishing and erecting these pipes which are built in place on concrete supports from wood staves Only two bids were received for this work and the contract was awarded to the Canadian Pipe Company, Vancouver, who were the lowest bidders. Their price being $32.15 per foot. The other tender was about $5,000.00 higher. No material has been delivered or work done on this contract to date.

## Contract No. 6.

Masonry in headworks, spillway and Old Man crossing and timber trestle in Old Man crossing.

Acting on the recommendation of Mr. D. W. Hays, Consulting Engineer, who was retained to report on the matter, the Council advised the Board of Trustees to build a fixed crest weir for the diversion dam at the headworks. This structure is to be constructed partly of concrete and partly of earth embankment. The portion across the main channel is built of concrete and is about 9 feet high and 640 feet long. The headgates and sluice gates are all to be located on the east side.

A log pass thirty feet wide is also provided at this end. The operating gates are all to be of the usual Stoney type.

For the balance of the distance across the main channel, there is to be a concrete weir with piers dividing it into five openings, 102.5 feet long. These piers are to support a light steel foot bridge which

will give easy access to the embankment on the west side for the purpose of maintenance and operation. From the end of the concrete work an earth embankment is to be constructed across the low flats until the high ground is reached on the west side at a distance of about a mile.

The spillway included in this contract will be located about half way between the headgates and the crossing of the Old Man River on the main canal. It is designed to be built of re-inforced concrete and to operate on the principal of a syphon. It will discharge from the main canal back into the river again any surplus water which happens to get past the headgates thus protecting the canal from overflow and consequent breach of the canal bank.

The work on the Old Man River Crossing included in this contract is the construction of the concrete piers and pedestals mentioned under contract No. 3 on which the steel work will rest and the timber trestle which will support the flume for part of the distance at the southerly end. The work comprises the construction of about 12,000 cubic yards of concrete plain and reinforced. This contract was widely advertised resulting in the Council receiving seven bids ranging from $364,619.00 to $432,702.00. The contract was awarded to A. G. Creelman and Company who were the lowest bidders and who already has contract No. 2. The next lowest bid was $3,400.00 higher.

The work under this contract is well under way although very little concrete has been placed up to date. The contractor has established a camp at the Old Man crossing and will work all winter at this point in order to get this portion of the contract completed before high water. It is estimated that about half the embankment at the headworks is completed.

### Contract No. 6*a*.—Machinery for Headworks.

This contract consisted of furnishing gates and raising devices for the headworks and the steel foot bridges over the weir. As the number of firms which could furnish this material is limited and well known, this contract was not advertised but instead invitations to bid were mailed to these companies with the result that we received five tenders, ranging from $17,700.00 to $25,400.00.

The Manitoba Bridge and Iron Works of Winnipeg, received the contract, being the lowest bidder. This contract has been practically completed.

### Contract No. 7.—Lumber.

This contract is for the furnishing of about three million board feet of lumber for the timber structures in the district including highway bridges.

For the purposes of this contract the district was divided into eight sections and the timber necessary for the construction of the structures in section estimated. Tenders were asked for each of these sections separately, reserving the right to award any one or all to the same bidder. Five bids were received for the complete order for the eight section together with a number of tenders for part of the order, also some informal bids on broken lots and on inferior grades to that specified. After going over the tenders carefully it was decided that the bid of the Jewell Lumber Company for the whole order was the most advantageous for the district to accept and the contract was awarded to them. This lumber is being shipped to various sidings on the railroad and hauled by the farmers to a central yard in each section where it is being stacked temporarily.

Contracts will be awarded later for building the timber structures in each section. The delivery of material under this contract has only just begun.

### Contract No. 8.—Telephone Line, Headworks to Main Office.

This contract called for the construction of a telephone line from the headworks to the main office in Lethbridge. For the greater part of the distance the line was strung on the poles of the Alberta Government Telephones under agreement to that effect. The contract was awarded to John S. Glover of Edmonton and the line is completed and in operation.

There remain two large contracts for which tenders will be asked. They are for the construction of masonry structures on the branch canals and the building of timber structures on the system. These will probably be advertised early in 1922.

The trustees of the district draw monthly by requisition approved by the Irrigation Council upon the bond trust account standing in the name of the Provincial Treasurer at Edmonton.

On December 31st there had been drawn from this account:

| | | |
|---|---|---|
| By requisition of trustees | $1,531,000.00 | |
| For interest payments | 132,000.00 | |
| For Bank and Treasury charges, exchange, etc. | 9,761.37 | |
| Total | | $1,672,761.37 |
| The receipts were: | | |
| Proceeds of Bond sale | $4,123,240.00 | |
| Interest earned to Dec. 31st | 84,845.03 | |
| Total | | $4,208,085.03 |
| Balance on hand at December 31st, 1921 | | $2,535,323.66 |

The money received by the trustees is deposited in the Lethbridge branch of the Bank of Commerce to the account of the Board. All cheques drawn on this account have to be countersigned by the Secretary of the Irrigation Council and the accounts for which they are issued are also closely scrutinized by him. The district receives three per cent. on the daily balance on this account and cheques are cashed at par at any branch of the Bank of Commerce in Southern Alberta.

The auditors' report, a copy of which is attached, shows that up to December 31st, 1921, the expenditure of the district has been:

| | |
|---|---|
| Administration | $ 201,459.84 |
| Construction | 1,233,012.56 |
| Engineering | 149,246.72 |
| Total | $1,583,719.12 |

The trustees for 1922 will be: T. W. Crofts (Chairman), T. H. Wyman, Emil Hann.

### United Irrigation District.

This district lies between the Waterton and Belly River just west of the Blood Indian Reserve. The United Irrigation District was erected by an order of the Minister of Public Works dated August 14th, 1919.

The lands originally included in this district were all owned by the Alberta Stake of Zion. On March 15th, 1920, however, another district known as the Lone Rock Irrigation District was erected adjoining this land on the north and extending almost to the junction of the two rivers.

Although the two areas were planned to be irrigated from the same system of works, they continued to exist as separate districts until, the Minister of Public Works having received a petition of the majority of the land holders of the Lone Rock District to be included within the United District, granted the petition, and, on March 2nd, 1921, ordered that the United District be enlarged. On the same day he issued an order dissolving the Lone Rock District. The enlarged United District assumed all the liabilities of the Lone Rock District. This district now contained 23,124 irrigable acres; the non-irrigable land within the district is 35,060 acres.

There are 158 ratepayers in the district each holding an average of about 150 acres irrigable.

Application having been made for assistance in financing, the Government employed D. W. Hays as Consulting Engineer who reported favourably on the project.

On August 3rd, 1921, the Irrigation Council approved the estimate submitted by the district and directed the trustees to submit to a vote of the ratepayers a by-law authorizing the raising of a loan of $645,000.00 upon the credit of the district. This was carried unanimously on the 24th of August. The Minister gave his assent to the raising of the loan by order dated August 31st, 1921.

In view of the experience which the Lethbridge Northern Irrigation District had had in trying to sell their bonds without Provincial Government guarantees, this district did not attempt to put the bonds on the market. All investigations, however, showed conditions so favourable for this district that the Government undertook to submit to the next legislature a Bill providing for the guarantee of debentures. Pending the guarantee of the debentures, the trustees were able to make arrangements with the Union Bank of Canada, Lethbridge branch, for a temporary loan of $30,000.00 which was approved by the Minister by order dated August 31st, 1921, and for an additional $30,000.00 approved November 15th. This enabled the district to proceed immediately with the construction of its works. Accordingly, with the approval of the Council, they appointed D. W. Hays as their District Engineer, who commenced immediately to prepare plans and specifications for the letting of contracts for canal excavation. The resident farmers of the district desired to be allowed to undertake the excavation of the canals. The Council agreed and the first eight miles of the Main Canal is now being built under twenty-one separate contracts which vary in size from 4,000 cubic yards to 25,000 cubic yards. Excavation was begun under this arrangement on October 12th, 1921, and continued until November 15th when it was necessary to shut down for the winter. During this period there was excavated 166,743 cubic yards of material for which the farmers received $38,221.00. One carload of culverts was shipped in to accommodate this work. This eight mile of canal is about seventy per cent. completed.

In advertising these contracts the Council set a maximum price for excavation of 20 cents for earth above which tenders would not be considered. As a result, nearly all the earthwork with the exception of that in the first two miles of the canal was contracted for at 20 cents per cubic yard; loose rock at 40 cents to 50 cents per cubic yard and solid rock at 60 cents to $1.00 per cubic yard.

On the first two miles which was a heavy cut through gravel the Council set 40 cents as the maximum for earth and the contract was awarded at that price; loose rock varying from 50 cents to 85 cents and solid rock $1.00 to $1.10.

The contracts entered into were of the same form as would have been required for an outside contractor with the exception that the

damages for non-completion on time are not as heavy, and in lieu of a bond 40 per cent. of the payments due are withheld until completion of the contract. When the work is finished 15 per cent. will be paid in cash and 25 per cent. will be retained and deposited by the trustees in a trust fund to the credit of the contractor-ratepayer. As the assessments for the payment of principal and interest become due they will be paid from the trust fund. Each contract further provides that all transactions in connection with the establishment of and payments from the trust fund shall have the prior approval of the Council. The source of water supply is the Belly River.

The Council is following the same procedure of countersigning all cheques and inspecting accounts as it has followed with the Lethbridge Northern District.

As soon as the weather permits this district expects to complete its surveys and continue the construction of the system. It is expected that the work will be completed by December, 1922.

The trustees for 1922 are: S. B. Smith (Chairman), George Stringham, E. J. Leavitt; Secretary-Treasurer, John Peterson.

### South Macleod Irrigation District.

The South Macleod Irrigation District contains a total of 91,532 acres of which about 61,000 are irrigable. This land extends along the west side of the Belly River from the Waterton River north to the Town of Macleod and east of Macleod to the junction of the Old Man and Belly Rivers. It is proposed to reduce the irrigable land to 53,000 acres. The proposed intake is located on west side of the Waterloo River just west of Glenwoodville. The district was erected by order of the Minister dated September 10th, 1921.

There are 228 separate owners of irrigable land in this district, giving an average of 232 acres irrigable to each owner.

D. W. Hays, Consulting Engineer, who was employed by the Province for the purpose submitted his report on the project under date of December 27th, 1921.

Owing to the topography of the country it was found impossible to reach the land in the vicinity of Pearce with the works planned for this district. Accordingly none of the land in Township 10 was included in the district.

On September 22nd a meeting was called of all the farmers on the south side of the Old Man River in Township 10 at which the Secretary of the Council was asked to be present for the purpose of considering the possibility of pumping water from the end of this system or some other source to irrigate this land. The Commissioner of Irrigation was also present. As a result the Reclamation Service is investigating the possibility of irrigating this land.

### Lethbridge South-Eastern Project.

This project includes some 350,000 acres of irrigable land located in the area to the south-east of Lethbridge, bounded on the west by the St. Mary River; on the north by the Old Man and South Saskatchewan Rivers; on the south by Milk River; and on the east by Forty Mile Coulee and Pakowki Lake. This area is being studied by the Reclamation Service of the Dominion Government with a view to the most economical use of the available water.

Their studies are not yet completed and no final steps can be taken in connection with development of the various irrigation district projects which are included in the area although preliminary steps are being taken by residents in various sections for the purpose of being

prepared to proceed when it does become possible to do so. One district, the southern, was formed some time ago in this area, and a number of others are proposed, viz.:

The New Dayton District;
The Masinasin District;
The Warner-Milk River District.

To irrigate this tract it is proposed to use the waters of the Waterton, the Belly, the St. Mary and the Milk Rivers.

Within the area above mentioned there is more land susceptible to irrigation than there is water available for the purpose in these streams. It is, therefore, imperative that as much of this water as possible be made available for use by storage in reservoirs. Among the reservoirs proposed for this purpose is one to be constructed at Waterton Lakes. On June 9th, 1921, a meeting was held in the rooms of the Irrigation Council of those interested in this project. About twenty people representing various sections of the area were present also a representative of the Dominion Reclamation Service. It was apparent after considerable discussion that very little progress could be made until the International Joint Commission gave a decision in regard to the treaty dividing the waters of the St. Mary and Milk Rivers between the United States and Canada. On September 15th, the secretary attended the hearing of the International Joint Commission held at Chinook, Montana, and also the meeting of the Commission at Lethbridge on September 17th, when the Chairman of the Council was also present.

On October 4th the Commission rendered a decision which is in the nature of a compromise between the extreme positions taken by both countries. The claim of the United States that only the waters which cross the boundary from one country to the other should be divided is upheld and Canada's contention that the priorities assigned to the countries should first be set aside and the balance divided equally is supported. In brief the decision results in the following:

When there is 666 cubic feet per second or less running in the St. Mary River, Canada gets three quarters during the irrigation season (May 1st to September 30th) and one-half during the remainder of the year.

When the flow exceeds 666 cubic feet per second, Canada gets 500 c.f.s. and half the excess above this amount during the irrigation season and during the balance of the year one-half the total flow. The point where the stream crosses from Canada into the United States is the point of measurement. On the Milk River the same division is maintained in the reverse order; that is, the United States gets three quarters during the irrigation season and half during the non-irrigation season when the flow is 666 c.f.s. or less and 500 c.f.s. plus half the excess when the flow exceeds 666 c.f.s. in the irrigation season and half the total flow in the non-irrigation season. The tributaries to the Milk River in Saskatchewan are to be equally divided at the boundary. Realizing that an economic use of the waters so divided involved storage, the Commission under date of October 6th, 1921, submitted certain recommendations to the two countries in regard to this matter which in brief are as follows:

That the two Governments enter into an agreement to construct the St. Mary's Lake reservoir in Montana. That the United States proceed to construct the Chain of Lakes reservoir in Montana and Canada the Verdigris Coulee reservoir.

As the Lethbridge southern-eastern project depends upon these two rivers for a portion of its supply, it is evident that very little progress can be made toward developing this land until the Governments have taken some action in regard to these recommendations.

## Proposed Little Bow Irrigation District.

The purpose of this project is to irrigate the bottom lands along the Little Bow River by diverting water from the Highwood River into the channel of the Little Bow River, and pumping from this source on to the lands to be served. The district proposes to construct the headworks and the diversion canal to the Little Bow River leaving each user in the district to construct his own pumping plans or other means of diversion at his own expense. There are about 3,200 acres of irrigable land in this district divided among 34 separate owners. The parcels varying in size from nine acres to 476 acres. One of these parcels can be served by gravity, the remainder will be obliged to pump. The greater part of the land is less than forty feet above the river, the two exceptions having 49 and 53 feet lift respectively. It is proposed to construct the headworks and diversion canal large enough to accommodate an additional 50 c.f.s. for which the Province holds license for domestic use of the farmers along the Little Bow. This Provincial license is a legacy from the Territorial Government and the old diversion works located some distance above High River have been the source of considerable annoyance and expense to the Province every year owing to the fact that the Highwood River channel at this point shifts after each high water and is now nearly half a mile from the original position of the headgates. A short canal from these headgates conducts the water into Baker Creek. It is re-diverted again from this channel at a point on the outskirts of High River into a ditch which conducts it into the Little Bow River. The Province has been obliged to spend a considerable amount each year on the dam at the mouth of Baker Creek in order to maintain this diversion in addition to the expense at the headgates.

The proposed location of the headworks of the Little Bow District is within the town of High River just below the highway bridge at which point the river channel is stable and any construction at this point would be permanent. The Province has agreed, if the district satisfactorily constructs permanent diversion works of sufficient capacity to include the 50 c.f.s. needed for domestic purposes, to contribute one half of the cost up to but not exceeding $18,000.00, the district to operate and maintain the works. The surveys and estimates have been completed by the Reclamation Service and petitions will soon be submitted for the formation of the district.

## Retlaw-Lomond Project.

On Saturday, June 25th, by request, the Council and the Minister attended a meeting in Enchant called by those interested in this project. A large number of farmers were present. It was brought out at this meeting that there were many difficulties in the way of enlarging and extending the Lethbridge Northern Irrigation System, the construction of which had just begun, and that the Reclamation Service was investigating the possibility of supplying water through the works of the Canada Land and Irrigation Company. Until this matter of the most feasible source of water supply is settled, very little progress can be made towards erection of a district. The report of the Reclamation Service in this matter has not yet been made.

## Proposed Champion District.

On July 14th, 1921, the secretary attended a meeting at Champion called by the farmers in that vicinity to consider the matter of irrigating their lands. It was brought out in the meeting that the Re-

clamation Service was investigating the possibility of covering about 50,000 acres of this land by a canal from the Highwood River and it was pointed out to those present until the feasibility of this could be determined nothing could be done.

### New West Irrigation Project.

The Council, accompanied by the Minister, by request, attended a meeting at the New West school house on the evening of June 23rd, which was called by the farmers in the vicinity to discuss the possibility of irrigation for their lands. The discussion brought out the fact that the Canada Land and Irrigation Company was willing to furnish water through their works on the same basis as they furnished their own people, the district, of course, to construct its own laterals. The Reclamation Service is now making surveys and estimates for this purpose. The formation of the district is awaiting the result of these estimates.

The Council has kept in close touch generally with the affairs of all organized districts as well as with those proposing to form.

Respectfully submitted,

Irrigation Council.

.....

*Chairman.*

.....

*Secretary.*

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